

IN THE CLAIMS

1. (Amended) A detection system for a bio-separation device having a separation channel, comprising:

a detection section along the separation channel having a second width larger than the first width and a transition from the first width to the second width, the detection section defining a detection zone at a distance of 100 to 500 times the second width from the transition;

means for introducing excitation radiation at the detection zone as analytes pass the detection zone; and

means for axially detecting radiation emission from the detection zone.

11. (Amended) The detection system as in claim 3 wherein the means for introducing excitation radiation axially comprises a radiation source and a light transmitting material disposed between the radiation source and the detection zone to guide excitation radiation to the detection zone.

16. (Amended) A bio-separation instrument, comprising:

a separation channel;

means for separating a sample in the separation channel into analytes; and

a detection system, comprising:

(a) a detection section along the separation channel having a second width larger than the first width and a transition from the first width to the second width, the detection section defining a detection zone at a distance of 100 to 500 times the second width from the transition;

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(b) means for introducing excitation radiation at the detection zone as analytes pass the detection zone; and

(d) means for axially detecting radiation emission from the detection zone.

21. (New) A detection system for a bio-separation device having a separation channel, comprising:

a detection section along the separation channel defining a detection zone;

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means for introducing excitation radiation axially at the detection zone as analytes pass the detection zone, said means for introducing radiation including an optic fiber having an end in close proximity to the detection zone; and

means for detecting radiation emission from the detection zone.
